

1. A device for use in noninvasively evaluating a limb suspected of compartment syndrome, the device comprising in combination:

an applicator instrument including a base portion, a force plate having a cross section, and a force probe, the force probe being positioned  
5 through an aperture of the force plate, the force probe having a solid cross section of an area that is substantially smaller than the cross section of the force plate, the force probe and force plate being biased relative to one another, the force plate being permitted to slide relative to the probe, the force plate including at least one stabilizing column which is slidably received  
10 within the base portion, an encoder positioned within the base portion for measuring the travel distance of the stabilizing column, such distance corresponding to the movement of the force plate relative to the force probe, a load cell directly connected to the force probe for use in measuring the pressure applied to the force probe.

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2. The device as described in claim 1 wherein the device further includes a series of lights to provide a user feedback regarding the force rate of application of the device.

20 3. A device for use in evaluating a limb, the device comprising in combination:

an applicator instrument including a force plate and a force probe which are slidably related to one another, the force probe having a solid cross section and being substantially smaller than the force plate, a spring  
25 secured about the force probe and biasing the force probe relative to the force plate, an encoder positioned within the instrument for measuring the relative distance between a distal end of the force plate and a distal end of the force probe, a load cell directly interconnected to the force probe for use in measuring the pressure applied to the force probe, wherein the distance and  
30 pressure measurements are used in making a medical diagnosis.

4. The device as described in claim 3 further including a breakout box electrically coupled to the instrument, the breakout box receiving pressure measurements from the load cell, the breakout box including indicator means for signifying the presence of predetermined minimum and maximum pressure measurements.

5. The device as described in claim 4 further including a computer electrically coupled to the breakout box for use in providing electrical power to the instrument and breakout box, the computer being used in collecting, storing and analyzing pressure and distance measurements collected by the instrument.

6. A method for a user to evaluate a limb suspected of compartment syndrome, the method comprising the following steps:

applying increasing pressure to the limb being evaluated over a predetermined time period, the pressure being applied by a distal end of an applicator instrument, the distal end including a force plate and a force probe which are slidable relative to one another in response to the increasing pressure;

monitoring the predetermined time period by way of a timing signal detectable by the user;

sensing and measuring the pressure applied to the force probe, storing a series of pressure measurements over the predetermined time period;

sensing and measuring the distance between a distal end of the force plate and distal end of the force probe, storing a series of distance measurements over the predetermined time period;

monitoring the force rate of application of the device and modifying the rate of application of force based upon the monitoring.